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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,934	11/03/2003	Ikuo Takahashi	032044	5043
38834	7590	06/08/2006		
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP 1250 CONNECTICUT AVENUE, NW SUITE 700 WASHINGTON, DC 20036			EXAMINER NUTTER, NATHAN M	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/698,934	TAKAHASHI ET AL.	
	Examiner	Art Unit	
	Nathan M. Nutter	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 6-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Response to Amendment

In response to the amendment filed 18 April 2006, the following is being placed in effect.

The objection of the disclosure as needing a substitute specification in proper idiomatic English and a title of the invention that is descriptive, is hereby expressly withdrawn.

The rejection of claims 1-10 under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for "aliphatic co-polyesters", does not reasonably provide enablement for "biodegradable plastic," as is claimed, is hereby expressly withdrawn.

The rejection of claims 1-10 under 35 U.S.C. 102(b) as being anticipated by Kage et al (US 5,714,220), is hereby expressly withdrawn.

The rejection of claims 1-4, 6 and 8-10 under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al (US 4,500,686), is hereby expressly withdrawn.

New grounds of rejection will follow.

Claim Interpretations- Conventional Use

The claims recite broadly the inclusion into a resin of (B) a carbodiimide compound and at least one compound (C) selected from the group consisting of benzotriazole-, triazine- and hydroxylamine-based compounds. The combination of these additives is well-known and previously employed in the prior art.

Note the reference to Kaufhold et al (US 6,559,266), newly cited, at column 7 (line 37) to column 8 (line 51) for the conjunctive use of a benzotriazole and a carbodiimide, including the use of TINUVIN 328 of page 22, final full paragraph of the Specification. The reference teaches the use of the carbodiimide as an anti-hydrolysis agent at column 2 (lines 36-39).

Note the reference to Kaufhold et al (US 6,527,995), newly cited, at column 9 (line 15) to column 10 (line 24) for the conjunctive use of a benzotriazole and a carbodiimide, including the use of TINUVIN 328 of page 22, final full paragraph of the Specification.

The patent to Prissok et al (US 5,900,439), newly cited, shows the conventional usage of hydrolysis inhibitors of carbodiimides with adjunctive use of benzotriazoles "for preventing thermal oxidation." Note column 2 (lines 1-33). Further, note column 3 (lines 18-31). Both components are added to resins to prevent oxidation reactions. Note column 1 (lines 60-67).

The reference to Murschall et al (US 6,855,758), newly cited, shows the combination at column 3 (lines 39-54) for the carbodiimides and column 7 (lines 10 et seq.) for the UV stabilizers, including benzotriazoles. The reference teaches clearly that the "use of UV stabilizers in combination with hydrolysis stabilizers leads to useful films with excellent properties" at column 7 (lines 57-60).

The reference to Murschall et al (US 2003/0091843), newly cited, shows the conjunctive use of the carbodiimides with a benzotriazole UV stabilizer at paragraphs [0017], [0019], [0053]-[0058]. Again, this reference shows the "use of

UV stabilizers in combination with hydrolysis stabilizers leads to useful films with excellent properties" at paragraph [0053].

The employment of the two recited additives is deemed to be conventional to those having an ordinary skill in the art. Applicants' assertions of a synergistic effect of a "greater hydrolysis resistance" are deemed irrelevant since the combination is so widely known and shown to produce "useful films with excellent properties." Any use of the combination would produce the identical synergistic effect as alleged by applicants. Nothing in the claims is drawn to any synergistic effect.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C.:

112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 10 recites the process of "controlling a biodegradation rate of an aliphatic polyester" by compounding the resin with components (B) and (C) "to adjust its biodegradability." The claim does not recite any aspect of what is necessary "to adjust its biodegradability" other than the mere presence of components (B) and (C). As such, it cannot be determined what the metes and bounds of this might be, and the instant claim is deemed to be vague and confusing.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 3, 4 and 6-10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 11/051,462 in view of Kaufhold et al (US 6,559,266), Kaufhold et al (US 6,527,995) or Prissok et al (US 5,900,439). The copending application teaches the manufacture of a biodegradable plastic composition that at paragraphs [0044] to [0049] employs a carbodiimide and at paragraph [0126] may employ UV absorbing agents.

Note the reference to Kaufhold et al (US 6,559,266) at column 7 (line 37) to column 8 (line 51) for the conjunctive use of a benzotriazole, a known UV stabilizer, and a carbodiimide, including the use of TINUVIN 328 of page 22, final

full paragraph of the Specification. The reference teaches the use of the carbodiimide as an anti-hydrolysis agent at column 2 (lines 36-39).

Note the reference to Kaufhold et al (US 6,527,995) at column 9 (line 15) to column 10 (line 24) for the conjunctive use of a benzotriazole, as an ultraviolet light stabilizer, and a carbodiimide, including the use of TINUVIN 328 of page 22, final full paragraph of the Specification.

The patent to Prissok et al (US 5,900,439) shows the conventional usage of hydrolysis inhibitors of carbodiimides with adjunctive use of benzotriazoles, a known "UV filter" and stabilizer "for preventing thermal oxidation." Note column 2 (lines 1-33). Further, note column 3 (lines 18-31). Both components are added to resins to prevent oxidation reactions. Note column 1 (lines 60-67).

The employment of the two recited additives is deemed to be conventional to those having an ordinary skill in the art, and subsequent use in the composition of the copending application, on the suggestion thereof in said copending application, would have been obvious.

This is a provisional obviousness-type double patenting rejection.

Claims 1, 3, 4 and 6-10 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 11/172,904 in view of Kaufhold et al (US 6,559,266), Kaufhold et al (US 6,527,995) or Prissok et al (US 5,900,439). The copending application teaches the manufacture of a biodegradable plastic composition that in claims 1-13 employs a carbodiimide and at paragraph [0059] may employ UV absorbing agents.

Note the reference to Kaufhold et al (US 6,559,266) at column 7 (line 37) to column 8 (line 51) for the conjunctive use of a benzotriazole, a known UV stabilizer, and a carbodiimide, including the use of TINUVIN 328 of page 22, final full paragraph of the Specification. The reference teaches the use of the carbodiimide as an anti-hydrolysis agent at column 2 (lines 36-39).

Note the reference to Kaufhold et al (US 6,527,995) at column 9 (line 15) to column 10 (line 24) for the conjunctive use of a benzotriazole, as an ultraviolet light stabilizer, and a carbodiimide, including the use of TINUVIN 328 of page 22, final full paragraph of the Specification.

The patent to Prissok et al (US 5,900,439) shows the conventional usage of hydrolysis inhibitors of carbodiimides with adjunctive use of benzotriazoles, a known "uv filter" and stabilizer "for preventing thermal oxidation." Note column 2 (lines 1-33). Further, note column 3 (lines 18-31). Both components are added to resins to prevent oxidation reactions. Note column 1 (lines 60-67).

The employment of the two recited additives is deemed to be conventional to those having an ordinary skill in the art, and subsequent use in the composition of the copending application, on the suggestion thereof in said copending application, would have been obvious.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imamura et al (US 5,616,657), newly cited, taken in view of Kaufhold et al (US 6,559,266), Kaufhold et al (US 6,527,995) or Prissok et al (US 5,900,439).

The reference to Imamura et al shows the aliphatic polyester at column 6 (lines 43-50). The reference teaches throughout the production of the polyester from aliphatic components. Note the many Examples. Further, note column 19 (lines 29-38) for the inclusion of ultraviolet inhibitors, including benzotriazoles and a stabilizer, including carbodiimides.

Note the reference to Kaufhold et al (US 6,559,266) at column 7 (line 37) to column 8 (line 51) for the conjunctive use of a benzotriazole, a known UV stabilizer, and a carbodiimide, including the use of TINUVIN 328 of page 22, final full paragraph of the Specification. The reference teaches the use of the carbodiimide as an anti-hydrolysis agent at column 2 (lines 36-39).

Note the reference to Kaufhold et al (US 6,527,995) at column 9 (line 15) to column 10 (line 24) for the conjunctive use of a benzotriazole, as an ultraviolet light stabilizer, and a carbodiimide, including the use of TINUVIN 328 of page 22, final full paragraph of the Specification.

The patent to Prissok et al (US 5,900,439) shows the conventional usage of hydrolysis inhibitors of carbodiimides with adjunctive use of benzotriazoles, a

known "UV filter" and stabilizer "for preventing thermal oxidation." Note column 2 (lines 1-33). Further, note column 3 (lines 18-31). Both components are added to resins to prevent oxidation reactions. Note column 1 (lines 60-67).

The employment of the two recited additives is deemed to be conventional to those having an ordinary skill in the art, and subsequent use in the composition of Imamura et al, on the suggestion thereof would have been obvious to an artisan of ordinary skill.

Claims 1, 3, 4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ariga et al (US 6,803,443), newly cited, taken in view of Kaufhold et al (US 6,559,266), Kaufhold et al (US 6,527,995) or Prissok et al (US 5,900,439).

The reference to Ariga et al shows the aliphatic polyester at column 2 (line 51) to column 3 (line 9), column 4 (lines 14 et seq.) and the many Examples. The reference teaches throughout the production of the polyester from aliphatic components. Further, note column 14 (lines 21-37) for the inclusion of benzotriazole-based ultraviolet inhibitors, and a stabilizer, including carbodiimides.

Note the reference to Kaufhold et al (US 6,559,266) at column 7 (line 37) to column 8 (line 51) for the conjunctive use of a benzotriazole, a known UV stabilizer, and a carbodiimide, including the use of TINUVIN 328 of page 22, final full paragraph of the Specification. The reference teaches the use of the carbodiimide as an anti-hydrolysis agent at column 2 (lines 36-39).

Note the reference to Kaufhold et al (US 6,527,995) at column 9 (line 15) to column 10 (line 24) for the conjunctive use of a benzotriazole, as an ultraviolet light stabilizer, and a carbodiimide, including the use of TINUVIN 328 of page 22, final full paragraph of the Specification.

The patent to Prissok et al (US 5,900,439) shows the conventional usage of hydrolysis inhibitors of carbodiimides with adjunctive use of benzotriazoles, a known "UV filter" and stabilizer "for preventing thermal oxidation." Note column 2 (lines 1-33). Further, note column 3 (lines 18-31). Both components are added to resins to prevent oxidation reactions. Note column 1 (lines 60-67).

The employment of the two recited additives is deemed to be conventional to those having an ordinary skill in the art, and subsequent use in the composition of Ariga et al, on the suggestion thereof, would have been obvious to an artisan of ordinary skill.

Response to Arguments

Applicant's arguments, see above, filed 18 April 2006, with respect to the rejections of claims 1-10 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, new grounds of rejection are made in view of Ariga et al (US 6,803,443) and Imamura et al (US 5,616,657). See rejections above.

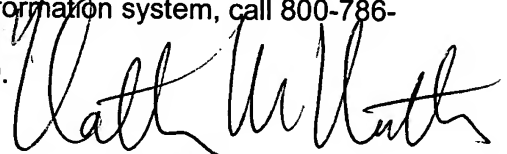
Applicants have not filed a Terminal Disclaimer to overcome the rejections of the claims under the judicially created doctrine of obviousness-type Double Patenting over copending Application No. 11/051,462 or copending Application No. 11/172,904. Those rejections are hereby maintained.

Due to the new grounds of rejection, this action is not being made FINAL.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan M. Nutter
Primary Examiner
Art Unit 1711

nmn

4 June 2006